

# Tomato Brown Rugose Fruit Virus Alert

**What is it?** Tomato brown rugose fruit virus (ToBRFV) is a virus in the Tobamoviruses genus. Tomato (*Solanum lycopersicum*) and capsicum (*Capsicum annuum*) are the main hosts. Petunia (*Petunia hybrida*) and certain weeds like black nightshade (*Solanum nigrum*) have been shown to be hosts in experiments and may act as environmental hosts. Although this virus is not known to be in Tennessee at this time, all producers must do their part to prevent the spread of ToBRFV.

**Where is it?** China, the Dominican Republic, France, Germany (eradicated), Greece, Italy, Jordan, Mexico, the Netherlands, Palestine, Spain, Turkey, and the United Kingdom

**What does it look like?** ToBRFV can cause severe fruit loss in tomatoes and peppers. On pepper foliage, it causes bubbling and mosaic patterns on leaves, while on tomato foliage it causes mosaic patterns and a “fern leaf” symptom. Infected fruits of both hosts are smaller, discolored, and may have rough, dead patches on the surface (see photos). Infected tomato fruits can be unmarketable or reduced in quality. Necrosis can occur on susceptible pepper fruit.



(Photo Credit: Figures 1 and 2: Luria, et al., 2017 <https://doi.org/10.1371/journal.pone.0170429.g001>; Figure 3: Alkowni, et al., 2019 <https://www.researchgate.net/publication/33072210>); Figure 4: Neta Luria et al./PLOS <https://creativecommons.org/licenses/by/4.0/>).

**How does it spread?** ToBRFV is transmitted through infected propagative plant parts (seeds, plants for planting, grafts, and cuttings), and spreads locally by contact (direct plant to plant contact, contaminated tools, hands, or clothing). ToBRFV can remain viable in seeds, plants debris, and contaminated soil for months.

Good sanitation practices will reduce the likelihood of spread. Workers should wear protective clothing when moving between greenhouses and clean tools frequently.

**What to do?** If you suspect your plants have ToBRFV contact the Tennessee Department of Agriculture at 615-837-5137 or email [plant.certification@tn.gov](mailto:plant.certification@tn.gov).